

## New Dacnusiini from the Iberian Peninsula and the Canary Islands (Hymenoptera, Braconidae, Alysini)

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**New Dacnusiini from the Iberian Peninsula and the Canary Islands (Hymenoptera, Braconidae, Alysini).** - Four species of Dacnusiini, two from the Iberian Peninsula: *Chorebus crenesulcis* and *C. fragilosus*, and two from Canary Islands: *Coloneura fuerteventurensis* and *C. ortegae*, are described as new, drawn, and are compared with allied species. Keys for their discrimination are provided.

**Key-words:** New species - *Chorebus* - Alysini - Braconidae.

## INTRODUCTION

Hymenoptera are characterized by their so-called haplo-diploidy. This means that males are haploid, females diploid. As a consequence, females lay eggs which, if not fertilized, give rise to males. Many descendants of a population may thus consist of males only until these males can copulate with the females. Then, the females will lay fertilized eggs only and these will give rise to female descendants. The result will be a sequence of generations which will consist alternatively predominantly either of females or males. One may therefore collect at the same time only females of one species and males of another species, i.e., specimens of different sex that do not necessarily belong to the same species.

In this article four species of Dacnusiini (Hymenoptera: Braconidae: Alysini), two from the Iberian Peninsula: *Chorebus crenesulcis* and *C. fragilosus*, and two from Canary Islands: *Coloneura fuerteventurensis* and *C. ortegae*, are described as new, drawn, and are compared with allied species. Keys for their discrimination are provided.

The specimens of this study are preserved in the following Institutions: Holotypes at the Muséum d'histoire naturelle de Genève (MHNG); paratypes at the Institut Cavanilles de Biodiversitat i Biologia Evolutiva (ICBBE).

Abbreviations used in the descriptions: IOL = postocellar line = interocellar line. OOL = oculo-ocellar line. F, F1, F2 etc. : Flagellomere (s), Flagellomere 1, 2 etc., Fm, Fp = middle Flagellomere (s), penultimate Flagellomere. T, T1, T2 = tergite (s), first, second tergite. st = pterostigma. r, r1, r2 = radial vein, first, second abscissa of radius. cc = cubital cross vein. nr = recurrent vein (Nervus recurrens). b = basal vein. cu2 = 2nd abscissa of cu (= cubital vein). d = discoidal vein. nv = nervulus. np = parallel vein (nervus parallelus). R = radial cell. B = brachial cell. nr' = radiellus (radial vein of hind wing). cu2' = second abscissa of cubital vein of hind wing. nr' = recurrent vein of hind wing.

## SYSTEMATIC PART

### DACNUSINI Förster

Diagnosis: Remarks on Dacnusiini of the Dacnusa-genus group (*Dacnusa* Haliday, *Chorebus* Haliday, *Coloneura* Foerster and others) in general: a) The mandible has an outer surface, an inner surface, and a dorsal surface. The latter is delimited from the outer surface by a strong lamella. As a rule, as well as the inner surface, it is not visible in the resting position of the mandible; b) If not stated otherwise: maxillary palpi 6-segmented, not longer than height of head; labial palpi 4-segmented; c) Clypeus is about 3-times as wide as high, shiny, with a few setae, projecting from face at an obtuse angle; upper and lower edges somewhat bent and parallel; d) Hind mesopleural furrow, prepectal furrow, and furrows of sides of pronotum smooth, unless otherwise stated; e) The wing membrane is nearly always hyaline; f) The pterostigma is nearly always longitudinally folded in dried specimens, thus hindering visualization of its true width. The relative proportions given refer to the visible, not true width of the pterostigma. The data given relative to the pterostigma are therefore only approximate; g) Hind wing with no peculiarities, this means r' and cu2' indicated, if at all, only as folds; nr' absent.

### *Coloneura* Foerster

#### *Coloneura fuerteventurensis* sp. n.

Figs 1, 2

*Holotype female*: Canary Islands, Fuerteventura, Villaverde, 18.II.1980, leg. G. Ortega, Museo Insular Ciencias Nat., Hy 4157 (MHNG).

*Paratypes*: 1 female, same data as holotype (ICBBE); 1 female, same locality, but 21.II.1980, leg. M. Báez (ICBBE).

*Etymology*: The name indicates the original locality.

*Taxonomic position*: The species runs to *Coloneura moskovita* Tobias, 1986 in key of Tobias (1986). The two species can be distinguished as follows:

1. Precoxal sulcus absent. T1 entirely glabrous. r2 completely and evenly bent. Antennae 18-segmented Russia: Moscow region  
..... *moskovita* Tobias, female/male
- Precoxal sulcus weakly crenelated (Fig. 1). T1 longitudinally striated (Fig. 2). r2 not evenly bent, but distal half nearly straight, at most with S-shaped outline (Fig. 1). Antennae 24-segmented. Canary Islands  
..... *fuerteventuresis* sp. n., female

FEMALE. – Length of body: 2.2 mm.

*Head*: 1.5-times as wide as long between eyes, 2.1-times as wide as face, 1.4-times as wide as mesoscutum, at most 3-fold width behind eyes; temples 1.8-times as long as eyes; antennal sockets as distant from each other as from eyes; occiput clearly bent inwards. IOL greater than width of one ocellus wide; OOL longer than width of ocellar area. Upper side inconspicuously setose laterally and on occiput. Epicranial suture weak, with a very weak epifrontal suture. Face 1.1-times as wide as high, central elevation very weak, long, whitish, felt-like setae in central area, setae of lateral areas inconspicuous, inner edges of eyes only weakly bent. Tentorial pits small. Clypeus ordinary in shape. Mandible as long as apically wide, denticle 1 blunt, slightly deflected sideways, denticle 2 pointed, denticle 3 very broad and rounded, incisions between denticles; outer surface rugose, upper surface delimited by a keel, glabrous; maxillary palpi 6-segmented, labial palpi 4-segmented. Antennae about as long as body, 24-segmented: F1 4-times, F2-F5 about 2.5-times, remainder about twice as long as wide, numerous setae shorter than width of F; in lateral view 3 or 4 sensilla visible.

*Mesosoma*: 1.4-times as long as high, upper side bent. Mesoscutum 1.4-times as wide as long; a few setae along the imaginary course of the notauli and on the declivity; dorsal fovea moderately elongate; notauli only developed on declivity and crenelated, passing into the lateral furrows. Praescutellar fovea divided, lateral areas with faint folds. Axillae and scutellum setose. Postaxillae and lateral areas of metascutum smooth. Propodeum rugose, with some white setae, especially laterally. Anterior furrow of sides of pronotum smooth. Precoxal sulcus (Fig. 1) narrow, crenelated; praepectal and epicnemial furrow crenelated. Metapleuron seta-pointed partly smooth. Hind femur 5-times as long as wide; hind tarsus slightly shorter than its tibia.

*Wing* (Fig. 1): fore wing; st parallel-sided, distal part twice as long as metacarp, proximal part as long as r1; distal half of r2 very weakly sinuate, nearly straight; R ending before tip of wing; nr antefurcal; d 1.5-times as long as nr; nv slightly postfurcal; B open; culb absent; a2 present, but weakened distally; hind wing with normal structure.

*Metasoma*: T1 (Fig. 2) nearly as long as wide, nearly parallel-sided, basally only slightly narrowed, irregularly and longitudinally striate, dorsal carinae short. Ovipositor sheaths concealed.

*Colouration*: Black. Yellow: anellus, mouth parts, all legs, tegulae, and wing venation. Very faintly darkened: base of hind coxa, tips of hind femur and hind tibia, hind tarsus.

*Variation*: One example with dull yellowish T2+3.

MALE. – Unknown.

*Coloneura ortegae* sp. n.

Fig. 3

*Holotype male*: Canary Islands, Fuerteventura, Villaverde, 18-II-1980, leg. G. Ortega, Museo Insular ciencias Nat., Hy 4155 (MHNG).

*Paratypes*: 1 male, 4158, same data as holotype (ICBBE); 1 male, same island, but Los Molinos, 22-II-80, leg. M. Báez (ICBBE).

*Etymology*: Dedicated to the collector Gloria Ortega.

*Taxonomic position:* This species runs to *Coloneura siciliensis* Griffiths, 1968 in the keys of Griffiths (1968a) and Tobias (1986). The two species can be distinguished as follows:

1. Propodeum and T1 smooth. Antennae 18-articulated. 1.4 mm. Sicily  
 ..... *siciliensis* Griffiths, female/male
- Propodeum rugose. T1 (Fig. 3) longitudinally striated. Antennae 23-24-articulated. 1.7 mm. Canary Islands ..... *ortegae* sp. n., male

MALE – Body length: 1.5 mm.

*Head:* 1.6-times as wide as long between eyes, 2.3-times as wide as face, 1.3-times as wide as mesoscutum, strongly widened behind eyes; temples twice as long as eyes, occiput bent inwards, antennal sockets as distant from each other as from eyes; upper side with inconspicuous setae laterally and on occiput; epicranial suture between ocelli; IOL longer than diameter of one ocellus; OOL longer than width of ocellar area; an inconspicuous epifrontal depression in front of ocelli. Face 1.3-times as wide as high; lateral areas with long erect setae and short setae; middle keel weakly indicated only above; eye edges weakly curved. Clypeus and labrum with long setae and recognizable seta points. Mandible about as long as wide, parallel-sided, but somewhat deflected upwards as a whole; denticle 1 broad, blunt, forming a right angle; denticle 2 pointed and projecting; denticles 3 and 4 small, retracted; small incisions between denticles 1, 2 and 3; outer surface coarsely reticulate, upper surface smooth; palpi short. Antennae 23-articulated, only slightly longer than body; F1 3-times as long as wide; following ones and Fp about twice as long as wide; most setae shorter than width of F, in lateral view 3 sensilla visible.

*Mesosoma:* 1.25-times as long as high, upper side slightly curved. Mesoscutum 1.25-times as wide as long; some setae on declivity and along the imaginary course of notauli hardly recognizable; dorsal fovea slightly elongated; notauli absent. Praescutellar fovea with some longitudinal carinae. Axillae setose. Postaxillae and lateral areas of metascutum shiny. Propodeum with delicate rugosity and weak, curved fold from middle of front margin to sides, with some setae laterally. Prexocal sulcus absent. Metapleuron inconspicuously seta-pointed posteriorly. Hind femora 5-times as long as wide; hind tarsus scarcely shorter than its tibia.

*Wings:* st parallel-sided, distal part twice as long as metacarp, proximal part as long as r1; distal half of r2 sinuate; R ending before tip of wing; d 1.2 times as long as nr; b and nr parallel; nv slightly postfurcal; B incompletely closed (culb obliterated); np arises from middle of B; hind wing normal.

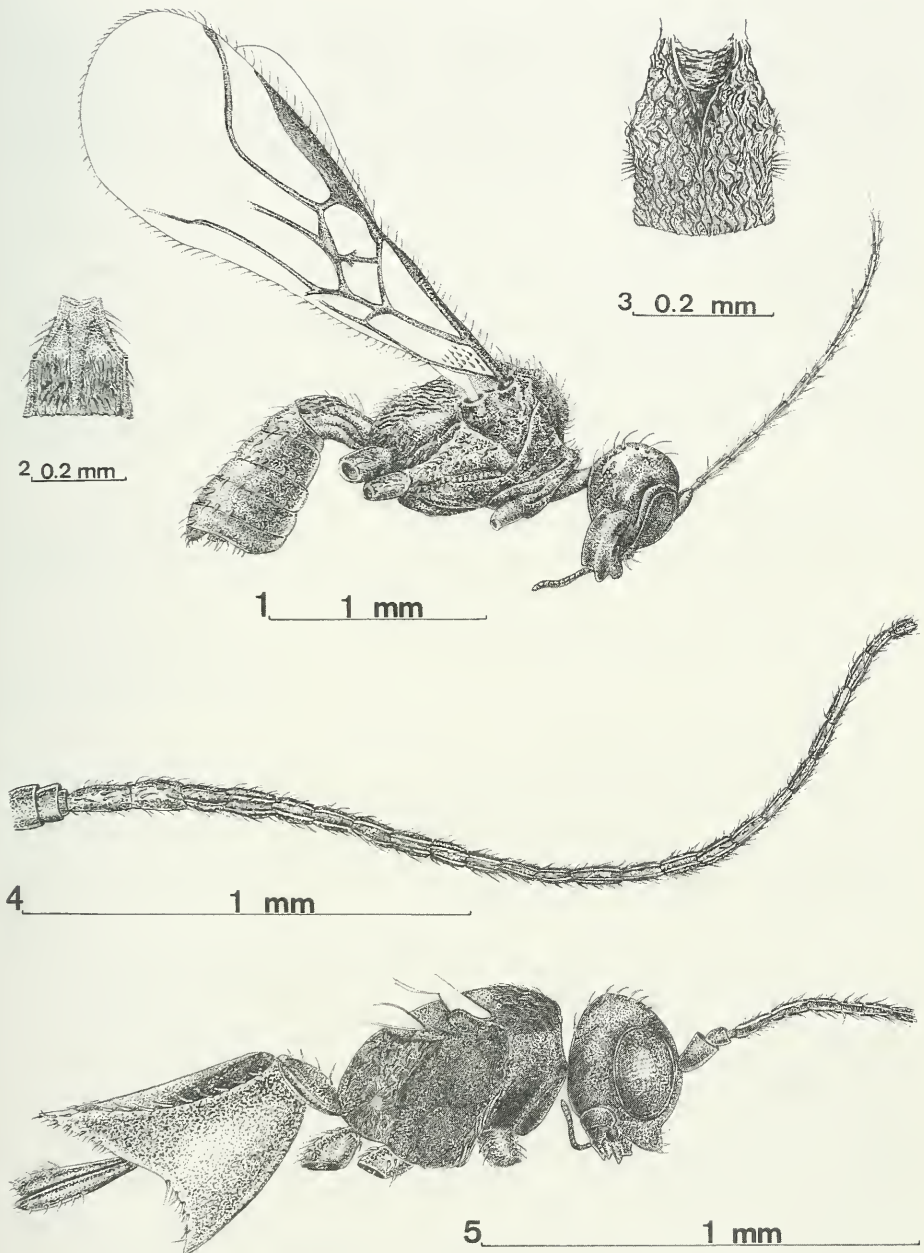
*Metasoma:* T1 (Fig. 3) 1.5-times as long as wide, parallel-sided, irregularly and longitudinally striate, dorsal carinae only straight and well-differentiated in front.

*Coloration:* Black. Yellow: anelli, mouth parts, tegulae and wing venation. Legs predominantly dark. T2 brown.

*Variation:* One example with 24 antennal segments, and T1 scarcely striated.

FEMALE. – Unknown.





FIGS 1-5

*Coloneura fuerteventurensis* sp. n. (female). Body in lateral view (1); T1: First tergite of metasoma (2). *Coloneura ortegae* sp. n. (male). T1: First tergite of metasoma (3). *Chorebus crensulcis* sp. n. (male). Antenna (4). *Chorebus fragilosus* sp. n. (female). Body in lateral view (5).

*Chorebus* Haliday

The two following species described – *Chorebus crenesulcis* sp. n. and *Chorebus fragilosus* sp. n. – look similar when viewed superficially. However, they show differences that are commonly taken as specific characters. Since one species is based on a female, the other on a male, one could speculate that they might be the female and male of the same species. Readers are referred to the introduction.

*Chorebus crenesulcis* sp. n.

Fig. 4

Holotype male: España, Valencia, El Saler (Viveros), T.N., 29-X/1-XI-1991, leg. F. Luna - J.V. Falcó (MHNG).

*Etymology*: This abbreviation stands for crenelatisulcis. It is reminiscent of the crenelated precoxal sulcus, prepectal suture, and epicoxal suture.

*Taxonomic position*: This species runs in keys of Griffiths (1968b) and Tobias (1986) to *Chorebus geminus* (Tobias, 1962) from which it can be distinguished as follows:

1. T1 2.5-times as long as apically wide. Antennae 39-articulated, twice as long as body, apical flagellomeres 2.5-times as long as wide. Head narrowed behind eyes. 2.3 mm. Azerbaijan . . . . . *geminus* Tobias, female
- T1 1.6-times as long as apically wide. Antennae (Fig. 4) 26-articulated, 1.5-times as long as body, apical flagellomeres twice as long as wide. Head between temples as wide as between eyes. 1.6 mm. Iberian Peninsula . . . . . *crenesulcis* sp. n., male

MALE. – Body length: 1.6 mm.

*Head*: twice as wide as long, 1.75-times as wide as the face, 1.33-times as wide as mesoscutum; eyes as long as temples; between temples as wide as between the eyes; occiput slightly bent inwards; antennal sockets as distant from each other as from eyes; upper side with inconspicuous setae laterally and on occiput, OOL longer than width of ocellar area; IOL longer than the diameter of one ocellus; epicranial furrow distinct. Face 1.75-times as wide as high, with scattered setae, seta points recognizable; middle elevation scarcely developed and bare; edges of eyes nearly parallel-sided. Clypeus of ordinary shape. Mandibles parallel-sided, as wide as along length of middle line; denticle 2 pointed and strongly projecting; denticles 1, 3 and 4 also pointed, but shorter and somewhat bent outwards; incisions between the denticles; outer surface uneven and with long setae basally; from denticle 1 arises a small lamella; palpi about as long as height of the head. Antennae (Fig. 4) 1.5-times as long as body, 26-articulated; F1 5-times, F2 a little wider and 3-times, Fm and Fp twice as long as wide; the longest setae as long as width of F; in lateral view 2 sensilla recognizable.

*Mesosoma*: 1.4-times as long as high, upper side only weakly arched. Mesoscutum 1.3-times as wide as long; notauli almost absent, evenly and densely setose with visible seta points especially on declivity, dorsal fovea small. Prescutellar fovea divided; lateral areas quadrate. Axillae setose. Scutellum with fewer setae. Postaxillae smooth. Metascutum with smooth lateral areas and a blunt medial lamella. Propodeum with weakly developed, broad pentagonal area and small basal keel, with white, scattered seta, which do not hide the surface. Anterior furrow of sides of pronotum deli-

cately rugose. Precoxal sulcus narrow, densely crenelated, shortened behind, reaching anterior edge of mesopleuron; prepectal furrow narrowly crenelated, passing into the crenelated epicoxal furrow; subalar area separated by a lamella; area above middle coxa with long, white setae. Metapleuron with numerous long, white setae, some of them forming a rosette around a central tubercle. Hind coxa with some long, scattered setae, but without a real tuft of setae. Hind femora 5-times as long as wide, hind tarsi as long as their tibiae.

*Wings:* st nearly parallel-sided, distal part twice as long as metacarp, proximal part as long as r1; r1 slightly longer than st wide; distal half of r2 nearly straight (scarcely recognizable, sinuate); nr antefurcal; d 1.1-times as long as nr; b and nr parallel; nv postfurcal; B open on lower distal corner; culb absent.

*Metasoma:* T1 1.6-times as long as apically wide; parallel-sided, narrowed only right in front, irregularly rugose; dorsal lamellae converging and forming a medial keel, with scattered setae, some outstanding setae on sides. T2 with a few long setae at base; the T for the rest with a single cross-row of long setae each.

*Colouration.* Yellow: anellus, clypeus, mouth parts, mesosoma except mesoscutum and scutellum, legs, tegulae, wing venation, and anterior half of metasoma. Dark to black: antennae, mesoscutum, scutellum, T3 and the following T. Mesopleuron brownish. Hind tibiae and hind tarsi slightly darkened.

FEMALE. – Unknown.

### *Chorebus fragilosus* sp. n.

Fig. 5

*Holotype female:* España, Valencia, El Saler (Viveros), T.M. 29-X-1991, leg. F. Luna - J.V. Falcó (MHNG).

*Etymology:* The name *fragilosus* is an abbreviation for *fragilipilosus*. It refers to the very weak pubescence of the propodeum and metapleuron.

*Taxonomic position:* The species runs in keys of Griffiths (1968b) and Tobias (1986) to *Chorebus canariensis* Griffiths, 1967 from which it can be distinguished as follows:

1. Precoxal sulcus narrow, crenelated, reaching from anterior edge to near the middle coxa. Propodeum with white, felt-like setae. Mesosoma and metasoma black, the latter only medially yellow. Ovipositor sheaths not projecting. Canary Islands . . . . . *canariensis* Griffiths, female/male
- Precoxal sulcus smooth, nearly absent (Fig. 5). Propodeum not white, felt-like setose, but scarcely pubescent. Mesosoma and anterior half of metasoma predominantly yellow. Ovipositor sheaths long, somewhat projecting (Fig. 5). Iberian Peninsula . . . . . *fragilosus* sp. n., female

FEMALE. – Body length: 1.3 mm.

*Head:* 1.9-times as wide as long, 1.5-times as wide as mesoscutum, 1.8-times as wide as face; eyes as long as temples; between eyes as wide as between temples; occiput moderately bent inwards; distance between antennal sockets and their distance from eyes as great as their diameter; upper side only with some inconspicuous setae laterally and on occiput; epicranial suture faint, with a longitudinal depression in front

of anterior ocellus; OOL greater than width of ocellar area; IOL greater than diameter of one ocellus. Face 1.5-times as wide as high, evenly convex, without delimited central elevation, with some inconspicuous setae only. Clypeus of ordinary shape, clearly arched. Tentorial pits round, their diameter smaller than distance from eyes. Mandible as wide as medially long, parallel-sided; denticle 1 blunt; denticle 2 pointed and projecting; denticles 3 and 4 blunt and retracted; small incisions between denticles; outer surface weakly rugose; palpi rather short. Antennae as long as body, 20-articulated; F1 3-times as long as wide, the following slightly shorter; Fm and Fp twice as long as wide; setae shorter than width of F; sensilla hardly visible.

*Mesosoma*: Mesoscutum 1.3-times as wide as long, with short, white setae evenly distributed over surface, hard, with a small bare area on lateral lobes behind; notauli only on declivity, anteriorly delimited by a weak carina, which passes into the lateral carina; only one very small dorsal pit. Prescutellar furrow deep, divided by a keel. Axillae and scutellum with a few white setae. Postaxillae smooth. Lateral areas of metascutum smooth, narrow, delimited by faint carinae, with a central lamella and a blunt tooth. Propodeum somewhat rugose, with short, white setae, which do not hide the surface. Precoxal sulcus (Fig. 5) absent. Metapleuron with numerous white setae, which do not hide the surface; seta points visible; central elevation present, but weakly developed. Hind femur 5-times as long as wide, hind tibia only slightly longer than its tarsus.

*Wings*: st nearly parallel-sided, distal part twice as long as metacarp, proximal part shorter than r1; r2 nearly straight in distal half; R ending before tip of wing; nr antefurcal, d 1.2-times as long as nr; b and nr parallel; nv clearly postfurcal; culb absent; B therefore open on lower outer corner.

*Metasoma*: T1 1.1-times as long as apically wide, evenly narrowed towards base; stigmata on small tubercles, converging dorsal carinae on basal half; central stripe slightly arched and rugose; lateral areas uneven, shiny, the setae do not hide the surface; a few laterally projecting setae on sides. Tip of metasoma pointed; hypopygium not reaching tip of metasoma. Ovipositor sheaths (Fig. 5) three quarters as long as hind tibia (lateral view), projecting somewhat beyond tip of metasoma.

*Colouration*: Yellow: scape, pedicel, anellus, mouth parts, legs, tegulae, wing venation, anterior half of metasoma, and hypopygium. Dark: head, antennae, the rest of the metasoma, and ovipositor sheaths. Hind tibiae and hind tarsi weakly infuscated.

MALE. – Unknown.

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